# Datasheet: MCA1972PE

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| **Description:** | MOUSE ANTI PIG CD18a:RPE |
| **Specificity:** | CD18a |
| **Other names:** | INTEGRIN BETA 2 CHAIN |
| **Format:** | RPE |
| **Product Type:** | Monoclonal Antibody |
| **Clone:** | PNK-I |
| **Isotype:** | IgG1 |
| **Quantity:** | 100 TESTS |

## Product Details

**Applications**

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

| | Yes | No | Not Determined | Suggested Dilution |
|---|---|---|---|---|
| Flow Cytometry | ▪ | | | Neat |

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

**Target Species**

Pig

**Species Cross Reactivity**

Reacts with: Camel
**N.B.** Antibody reactivity and working conditions may vary between species.

**Product Form**

Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized

**Reconstitution**

Reconstitute with 1.0 ml distilled water

**Max Ex/Em**

| Fluorophore | Excitation Max (nm) | Emission Max (nm) |
|---|---|---|
| RPE 488nm laser | 496 | 578 |

**Preparation**

Purified IgG prepared by affinity chromatography on Protein G

**Buffer Solution**

Phosphate buffered saline

**Preservative Stabilisers**

0.09% Sodium Azide
1% Bovine Serum Albumin
5% Sucrose

**Immunogen**

Porcine large granular lymphocytes.

**External Database**

**UniProt:**

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| **Links** | P53714 Related reagents<br><br>**Entrez Gene:**<br>396943 ITGB2 Related reagents |
| **Synonyms** | CD18 |
| **Fusion Partners** | Spleen cells from immunised Balb/c mice were fused with cells of the mouse P3-X63-Ag8.653 myeloma cell line. |
| **Specificity** | **Mouse anti Pig CD18a, clone PNK-I** recognizes porcine CD18a. PNK-I was clustered as CD18a at the Second International Workshop to Define Swine Cluster of Differentiation (CD) Antigens (Saalmuller *et al.* 1998). Clone PNK-I immunoprecipitates proteins of ~166 kDa, ~155 kDa and ~95 kDa under non-reducing conditions, specifically recognizing the 95 kDa protein, consistent with the integrin β2 chain (CD18). PNK-I inhibits porcine NK cell activity independent of any effect on antibody dependent cellular cytotoxicity (Dato and Kim 1990).<br><br>CD18 is a single pass type I transmembrane protein and is expressed on all leukocytes and is involved in a variety of cell functions. CD18 acts as a receptor for several ICAM molecules effecting intercellular adhesion functions, it is also involved in the recognition of a variety of extracellular substrate molecules.<br><br>CD18 acts as a receptor for a number of leukotoxins produced by fungi and bacteria. Clone PNK-I is able to ameliorate the effects of these leukotoxins by blocking binding of the toxins to the CD18 receptor (Chen *et al.* 2011). |
| **Flow Cytometry** | Use 10ul of the suggested working dilution to label $10^6$ cells in 100ul. |
| **References** | 1. Dato, M.E. & Kim, Y.B. (1990) Characterization and utilization of a monoclonal antibody inhibiting porcine natural killer cell activity for isolation of natural killer and killer cells. J Immunol. 144 (11): 4452-62.<br>2. Haverson, K. *et al*. (1999) T-cell populations in the pig intestinal lamina propria: memory cells with unusual phenotypic characteristics. Immunology 96: 66-73.<br>3. Vanden Bergh, P.G. *et al*. (2009) Porcine CD18 mediates Actinobacillus pleuropneumoniae ApxIII species-specific toxicity. Vet Res. 40:1-10.<br>4. Chen, Z.W. *et al.* (2011) Mechanisms underlying Actinobacillus pleuropneumoniae exotoxin ApxI induced expression of IL-1β, IL-8 and TNF-α in porcine alveolar macrophages. Vet Res. 42:25.<br>5. Vanden Bergh, P.G. *et al.* (2008) Probing of Actinobacillus pleuropneumoniae ApxIIIA toxin-dependent cytotoxicity towards mammalian peripheral blood mononucleated cells. BMC Res Notes 1:121.<br>6. Ebdrup, L. *et al.* (2008) Dynamic expression of the signal regulatory protein alpha and CD18 on porcine PBMC during acute endotoxaemia. Scand J Immunol. 68:430-7. |
| **Further Reading** | 1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. Vet Res. 39:54. |
| **Storage** | Store at +4$^{o}$C.<br><br>DO NOT FREEZE.<br><br>This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use. |

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| **Shelf Life** | 12 months from date of reconstitution. |
| **Health And Safety Information** | Material Safety Datasheet documentation #10075 available at: 10075: https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf |
| **Regulatory** | For research purposes only |

## Related Products

### Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:RPE (MCA928PE)


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